



**STATE OF TENNESSEE
DEPARTMENT OF HEALTH
ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL
Lab Services - Jackson Regional Lab
Jackson, TN 38301
731-426-0686

TDH: Lab Services KRL
Lab Services - Knoxville Regional Lab
Knoxville, TN 37920
865-549-5201

TDH: Lab Services NCL
Lab Services - Nashville Central Lab
Nashville, TN 37243
615-262-6300


Sent To: Geoff Klein
TDEC-DWS
200 East Race St
Knoxville, TN 37763

Lab ID: N00004693
Nashville Central Laboratory

Sampling Agency: TDEC: Division of Water Supply

Billing Code: 327.39-12

This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.


Analytical Supervisor

Lab-Sample Number: N00004693001
Project Name:
Sample Description: KINGSTON WTP
Sampler Project Name: RAW
Project Site No.:
Station No.:
Date/Time Collected: 06/22/2009 08:55
Sampler's Name: GEOFF KLEIN
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date:
Date/Time Received: 06/22/2009 11:30
Received By: P Singh

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	59	mg/L	3.8	10	M Chen	6/24/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	48	mg/L	0.7	1	P Leathers	6/24/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: N00004693002
Project Name:
Sample Description: KINGSTON WTP
Sampler Project Name: FINISH
Project Site No.:
Station No.:
Date/Time Collected: 06/22/2009 09:00
Sampler's Name: GEOFF KLEIN
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date:

Date/Time Received: 06/22/2009 11:30
Received By: P Singh

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow:

CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	58	mg/L	3.8	10	M Chen	6/24/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	52	mg/L	0.7	1	P Leathers	6/24/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: N00004693003
Project Name:
Sample Description: ROCKWOOD WTP
Sampler Project Name: FINISH
Project Site No.:
Station No.:
Date/Time Collected: 06/22/2009 09:35
Sampler's Name: GEOFF KLEIN
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date:
Date/Time Received: 06/22/2009 11:30
Received By: P Singh

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Alkalinity, Total			METHOD: EPA 310.2			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	62	mg/L	3.8	10	M Chen	6/24/2009

TEST: Hardness, Calcium			METHOD: SM 3500-Ca D			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	58	mg/L	0.7	1	P Leathers	6/24/2009

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number: N00004693004
Project Name:
Sample Description: ROCKWOOD WTP
Sampler Project Name: RAW
Project Site No.:
Station No.:
Date/Time Collected: 06/22/2009 09:40
Sampler's Name: GEOFF KLEIN
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date:
Date/Time Received: 06/22/2009 11:30
Received By: P Singh

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	73	mg/L	3.8	10	M Chen	6/24/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	56	mg/L	0.7	1	P Leathers	6/24/2009

J - Estimated value between MDL and MQL
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Nashville, TN 37243
615-262-6300

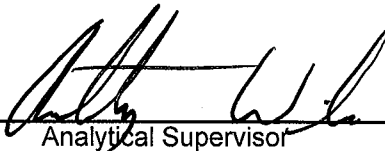
Sent To: Geoff Klein
TDEC-DWS
200 East Race St
Knoxville, TN 37763

Lab ID: N00004693
Nashville Central Laboratory

Sampling Agency: TDEC: Division of Water Supply

Billing Code: 327.39-12

This is to certify that the following results were determined using
good laboratory practices and in accordance with federal or state
approved methodologies.


Analytical Supervisor

Lab-Sample Number: N00004693001
 Project Name:
 Sample Description: KINGSTON WTP
 Sampler Project Name: RAW
 Project Site No.:
 Station No.:
 Date/Time Collected: 06/22/2009 08:55
 Sampler's Name: GEOFF KLEIN
 County: ROANE - 73
 Sample Matrix: Water
 EFO: Knoxville
 Sampling Agency: TDEC-DWS
 Billing Code: 327.39-12
 Send Report To: TDEC-DWS
 Agency Invoiced: TDEC-DWS
 Priority Date:
 Date/Time Received: 06/22/2009 11:30
 Received By: P Singh

Field Determinations

pH:
 Chlorine, residual:
 Conductivity:
 Temperature:
 Dissolved Oxygen:
 Other:
 Flow: CFS

TEST: Digestion Metals			METHOD: EPA 200.2			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	06/23/2009				S Ufegbu	6/23/2009

TEST: ICP-MS			METHOD: EPA 200.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Arsenic	U	µg/L	0.93	5	A Wilson	6/23/2009
Barium	21	µg/L	2.5	5	A Wilson	6/23/2009
Cadmium	U	µg/L	0.41	1	A Wilson	6/23/2009
Chromium	U	µg/L	2.0	5	A Wilson	6/23/2009
Cobalt	6.0	µg/L	0.04	1	A Wilson	6/23/2009
Lead	0.39J	µg/L	0.10	1	A Wilson	6/23/2009
Manganese	30	µg/L	0.42	1	A Wilson	6/23/2009
Selenium	U	µg/L	1.3	5	A Wilson	6/23/2009
Thallium	0.75J	µg/L	0.03	1	A Wilson	6/23/2009
Vanadium	3.8J	µg/L	3.4	5	A Wilson	6/23/2009

TEST: Mercury			METHOD: EPA 245.1			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	6/23/2009

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number: N00004693002
Project Name:
Sample Description: KINGSTON WTP
Sampler Project Name: FINISH
Project Site No.:
Station No.:
Date/Time Collected: 06/22/2009 09:00
Sampler's Name: GEOFF KLEIN
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date:

Date/Time Received: 06/22/2009 11:30
Received By: P Singh

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Digestion Metals			METHOD: EPA 200.2			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	06/23/2009				S Ufegbu	6/23/2009

TEST: ICP-MS			METHOD: EPA 200.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Arsenic	U	µg/L	0.93	5	A Wilson	6/23/2009
Barium	22	µg/L	2.5	5	A Wilson	6/23/2009
Cadmium	U	µg/L	0.41	1	A Wilson	6/23/2009
Chromium	U	µg/L	2.0	5	A Wilson	6/23/2009
Cobalt	0.35J	µg/L	0.04	1	A Wilson	6/23/2009
Lead	0.12J	µg/L	0.10	1	A Wilson	6/23/2009
Manganese	2.1	µg/L	0.42	1	A Wilson	6/23/2009
Selenium	U	µg/L	1.3	5	A Wilson	6/23/2009
Thallium	0.23J	µg/L	0.03	1	A Wilson	6/23/2009
Vanadium	U	µg/L	3.4	5	A Wilson	6/23/2009

TEST: Mercury			METHOD: EPA 245.1			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	6/23/2009

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number: N00004693003

Project Name:

Sample Description: ROCKWOOD WTP

Sampler Project Name: FINISH

Project Site No.:

Station No.:

Date/Time Collected: 06/22/2009 09:35

Sampler's Name: GEOFF KLEIN

County: ROANE - 73

Sample Matrix: Water

EFO: Knoxville

Sampling Agency: TDEC-DWS

Billing Code: 327.39-12

Send Report To: TDEC-DWS

Agency Invoiced: TDEC-DWS

Priority Date:

Date/Time Received: 06/22/2009 11:30

Received By: P Singh

Field Determinations

pH:

Chlorine, residual:

Conductivity:

Temperature:

Dissolved Oxygen:

Other:

Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	06/23/2009				S Ufegbu	6/23/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Arsenic	U	µg/L	0.93	5	A Wilson	6/23/2009
Barium	24	µg/L	2.5	5	A Wilson	6/23/2009
Cadmium	U	µg/L	0.41	1	A Wilson	6/23/2009
Chromium	U	µg/L	2.0	5	A Wilson	6/23/2009
Cobalt	0.081J	µg/L	0.04	1	A Wilson	6/23/2009
Lead	U	µg/L	0.10	1	A Wilson	6/23/2009
Manganese	0.99J	µg/L	0.42	1	A Wilson	6/23/2009
Selenium	U	µg/L	1.3	5	A Wilson	6/23/2009
Thallium	0.13J	µg/L	0.03	1	A Wilson	6/23/2009
Vanadium	U	µg/L	3.4	5	A Wilson	6/23/2009

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	6/23/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: N00004693004
Project Name:
Sample Description: ROCKWOOD WTP
Sampler Project Name: RAW
Project Site No.:
Station No.:
Date/Time Collected: 06/22/2009 09:40
Sampler's Name: GEOFF KLEIN
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
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Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Digestion Metals			METHOD: EPA 200.2			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	06/23/2009				S Ufegbu	6/23/2009

TEST: ICP-MS			METHOD: EPA 200.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Arsenic	U	µg/L	0.93	5	A Wilson	6/23/2009
Barium	24	µg/L	2.5	5	A Wilson	6/23/2009
Cadmium	U	µg/L	0.41	1	A Wilson	6/23/2009
Chromium	U	µg/L	2.0	5	A Wilson	6/23/2009
Cobalt	0.14J	µg/L	0.04	1	A Wilson	6/23/2009
Lead	0.28J	µg/L	0.10	1	A Wilson	6/23/2009
Manganese	13	µg/L	0.42	1	A Wilson	6/23/2009
Selenium	U	µg/L	1.3	5	A Wilson	6/23/2009
Thallium	0.091J	µg/L	0.03	1	A Wilson	6/23/2009
Vanadium	U	µg/L	3.4	5	A Wilson	6/23/2009

TEST: Mercury			METHOD: EPA 245.1			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	6/23/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected